

IN THE CLAIMS:

1. (Original) An etching method for plasma-etching an organic/inorganic hybrid film having low dielectric constant and represented by $\text{SiC}_x\text{H}_y\text{O}_z$ ($x>0$, $y\geq 0$, $z>0$), comprising the step of:

plasma-etching the organic/inorganic hybrid film with an etching gas containing fluorine, carbon and nitrogen,

wherein the carbon content in the organic/inorganic hybrid film is approximately between 17% and 37%.

2. (Original) The etching method of Claim 1, wherein the etching gas contains CO or CO_2 .

3. (Cancelled).

4. (Original) The etching method of Claim 1, wherein the plasma-etching step includes a sub-step of forming an opening in the organic/inorganic hybrid film by performing plasma etching using a resist pattern as a mask.

5. (Currently Amended) A fabricating method for a semiconductor device, comprising the steps of:

depositing an interlayer insulating film on an interconnection layer formed on a substrate, the interlayer insulating film being composed of an organic/inorganic hybrid film having low dielectric constant and represented by $\text{SiC}_x\text{H}_y\text{O}_z$ ($x>0$, $y\geq 0$, $z>0$);

forming a resist pattern having an opening on the interlayer insulating film, and

performing plasma etching on the interlayer insulating film with an etching gas containing fluorine, carbon and nitrogen and using the resist pattern as a mask, thereby forming a contact hole or an interconnection groove in the interlayer insulating film,

wherein the carbon content in the organic/inorganic hybrid film is approximately between 17% and 37%.

6. (Cancelled).

7. (Previously Presented) The etching method of Claim 1, wherein during the plasma-etching step, C_xH_y is changed into HCN or CN at the surface of the organic/inorganic hybrid film.

8. (Previously Presented) The etching method of Claim 1, wherein the organic/inorganic hybrid film includes a methyl group.

9. (Previously Presented) The fabricating method for a semiconductor device of Claim 5, wherein during the plasma-etching step, C_xH_y is changed into HCN or CN at the surface of the organic/inorganic hybrid film.

10. (Previously Presented) The fabricating method for a semiconductor device of Claim 5, wherein the organic/inorganic hybrid film includes a methyl group.

11. (New) A fabricating method for a semiconductor device, comprising the steps of:

depositing an interlayer insulating film on an interconnection layer formed on a substrate, the interlayer insulating film being composed of an organic/inorganic hybrid film having low dielectric constant and represented by $SiC_xH_yO_z$ ($x>0$, $y\geq 0$, $z>0$);

forming a resist pattern having an opening on the interlayer insulating film; and

performing plasma etching on the interlayer insulating film with an etching gas containing fluorine, carbon and nitrogen and using the resist pattern as a mask, thereby forming a contact hole or an interconnection groove in the interlayer insulating film,

wherein the organic/inorganic hybrid film has a specific dielectric constant of 2 to 3.

12. (New) The fabricating method for a semiconductor device of Claim 11, wherein C_xH_y is changed into HCN or CN at the surface of the organic/inorganic hybrid film.

13. (New) The fabricating method for a semiconductor device of Claim 11, wherein the organic/inorganic hybrid film includes a methyl group.